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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,351	04/18/2007	Thomas Kaulberg	4436-0133PUS1	9533

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EXAMINER

MONIKANG, GEORGE C

ART UNIT	PAPER NUMBER
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2615

NOTIFICATION DATE	DELIVERY MODE
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03/20/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/591,351	Applicant(s) KAULBERG, THOMAS	
	Examiner George C. Monikang	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-8 is/are rejected.
- 7) ☒ Claim(s) 4 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/591,351.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/31/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 & 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Chandran et al, US Patent 6,523,003 B1. (Chandran et al is cited in IDS filed 8/31/2006)

Re Claim 1, Chandran et al discloses a method for noise reduction in an audio device whereby an electrical and/or digital signal which represents sound is routed simultaneously through: a signal analysis path (fig. 3: 70 & 80), and a signal processing path wherein the signal amplification is individually controllable in specific frequency bands by attenuation values derived from the signal analysis path (fig. 3: 120, 130, 140, 150), whereby the signal in the signal analysis path is routed simultaneously through: a first detector which identifies the presence of speech indicators in the overall signal (fig. 3: 70), and a second detector which in a predefined number of frequency bands detects the modulation amplitude (fig. 3: 80), and where attenuation values in each of the predefined frequency bands are calculated based on the combined results of the first detector and the modulation amplitude in the specific frequency band detected by the second detector (fig. 3: 172), where the attenuation values in the predefined number of frequency bands are routed to the signal processing path in order to attenuate the signal level in corresponding frequency bands (fig. 3: 120, 130, 140, 150).

Re Claim 2, Chandran et al discloses the method as claimed in claim 1 whereby the second detector calculates the modulation amplitude by tracking peaks in the signal level and tracking the noise floor in the signal level and determines the distance between the overall level of the peaks and the noise floor (col. 18, lines 21-35).

Re Claim 5, Chandran et al discloses the method as claimed in claim 1, whereby the first detector for detecting the presence of speech indicators use statistical information relating to possible correlation of modulation in different frequency bands (col. 3, lines 54-62).

Claim 6 has been analyzed and rejected according to claim 1.

Claim 7 has been analyzed and rejected according to claim 2.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 3 & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandran et al, US Patent 6,523,003 B1 as applied to claim 2 above, and further in view of Chandran et al's admitted prior art, US Patent 6,523,003 B1 (Hereinafter referred to as CAAPA, col. 1, lines 1-56).

Re Claim 3, Chandran et al discloses the method as claimed in claim 2, but fails to disclose whereby the level of the noise floor in each frequency band is used to scale the calculated corresponding attenuation value (CAAPA, col. 1, lines 42-56), such that higher noise floor levels results in possible higher attenuation values (CAAPA, col. 1, lines 42-56). However, CAAPA does.

Taking the combined teachings of Chandran et al and CAAPA as a whole, one skilled in the art would have found it obvious to modify the method of Chandran et al with whereby the level of the noise floor in each frequency band is used to scale the calculated corresponding attenuation value (CAAPA, col. 1, lines 42-56), such that higher noise floor levels results in possible higher attenuation values (CAAPA, col. 1, lines 42-56) as taught in CAAPA to create an improved overall perceived sound quality.

Claim 8 has been analyzed and rejected according to claim 3.

Allowable Subject Matter

6. Claims 4 & 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter for claims 4 & 9: The prior art does not teach or moderately suggest the following limitations:

Wherein the attenuation values in each specific frequency band are calculated in the following way: first attenuation values are calculated according to a first predefined transfer function between the modulation amplitude detected by the second detector and attenuation values whereby the first transfer function prescribes generally low attenuation values, second attenuation values are calculated according to a second predefined transfer function between the modulation amplitude detected by the second detector and attenuation values whereby the second transfer function prescribes generally high attenuation values, fading between the first and the second calculated attenuation values is performed in response to the detected speech presence indicators from the first detector.

Limitations such as these may be useful in combination with other limitations of claim 3.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Monikang whose telephone number is 571-270-1190. The examiner can normally be reached on M-F. alt Fri. Off 7:30am-5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

George Monikang

2/28/2008

/Vivian Chin/
Supervisory Patent Examiner, Art Unit 2615